

IN THE CLAIMS

Cancel claim 1 and substitute claims 24-44 as follows:

1 ~~24.~~ A decoder for decoding an encoded digital signal,
2 wherein the encoded digital signal represents a wideband
3 digital signal having a sampling frequency F_s , and the encoded
4 digital signal comprises consecutive frames, each frame
5 comprising a plurality of information packets, each information
6 packet comprising N bits, N being larger than 1, a frame
7 comprising at least a first frame portion including syn-
8 chronization information; and wherein the decoder comprises:
9 an input for receiving the encoded digital signal,
10 means for converting the encoded digital signal into a
11 replica of the wideband digital signal, and
12 an output for supplying the replica of the wideband
13 digital signal,
14 characterized in that said converter is arranged for
15 converting a signal having a number of information packets in
16 one frame determined according to the formula
17

18

19
$$P = \frac{BR}{N} \times \frac{n_s}{F_s}$$

20 where BR is the bitrate of the encoded digital signal and n_s is
21 the number of samples of the wideband digital signal whose
22 corresponding information in the encoded digital signal is
23 included in one frame of the encoded digital signal, and
24 if P is an integer, the number of information packets
in one frame is P , and

25 if P is not an integer, the number of information
26 packets in a number v of the frames is P', where P' is the
27 highest integer whose value is less than P; and the number of
28 information packets in a number w of the other frames is equal
29 to P'+1, the numbers v and w being selected such that the
30 average frame rate of the encoded digital signal is
31 substantially equal to F_s/n_s .

2
1 ~~25.~~ A decoder as claimed in claim ~~24~~¹, characterized in that
2 the first frame portion comprises further information
3 relating to the number of information packets in the frame, and
4 the decoder comprises retrieval means to retrieve said
5 further information from the first frame portion in said frame
6 upon reception of the encoded digital signal.

3
1 ~~26.~~ A decoder as claimed in claim ~~24~~¹, characterized in that F_s
2 = 48 kHz.

4
1 ~~27.~~ A decoder as claimed in claim ~~24~~¹, characterized in that $N =$
2 32.

5
1 ~~28.~~ A decoder as claimed in claim ~~24~~¹, characterized in that n_s
2 = 384.

6
1 ~~29.~~ A decoder as claimed in claim ~~24~~¹, characterized in that BR
2 = 384. ^{bits/s}

7
1 ~~30.~~ A decoder as claimed in claim ~~24~~¹, characterized in that the
2 first frame portion further includes system information, and
3 the decoder comprises retrieval means for retrieving said

4 system information from the first frame portion in said frame
5 upon reception of the encoded digital signal.

1 ⁸
2 ~~31~~. A decoder as claimed in claim ⁷~~30~~, characterized in that the
system information relates to the bitrate BR.

1 ⁹
2 ~~32~~. A decoder as claimed in claim ⁷~~30~~, characterized in that the
system information relates to the sampling frequency F_s .

1 ¹⁰
2 ~~33~~. A decoder as claimed in claim ⁷~~30~~, characterized in that the
3 system information identifies a frame as having one information
4 packet more than other packets.

1 ¹¹
2 ~~34~~. A decoder as claimed in claim ⁷~~30~~, characterized in that
3 the system information identifies a transmission mode
4 for the digital signal, the system information identifying an
5 encoded digital signal comprising information relating to a
6 stereo audio signal, an encoded digital signal comprising
7 information relating to a mono audio signal, a bilingual
8 signal, or an intensity stereo encoded audio signal, and
9 the decoder comprises retrieval means for retrieving
the mode identification.

1 ¹²
2 ~~35~~. A decoder as claimed in claim ⁷~~30~~, characterized in that
3 a frame comprises said first frame portion, a second
4 frame portion and a third frame portion,
5 the encoded digital signal further comprises
6 allocation information and samples of a plurality of quantized
7 subsignals, the allocation information indicating for said
plurality of quantized subsignals the number of bits

8 representing the samples of said quantized subsignals, the
9 allocation information being included in said second frame
10 portion and said samples being included in said third frame
11 portion of a frame, and

12 the decoder further comprises second retrieval means
13 for retrieving the allocation information from said second
14 frame portion, and third retrieval means for retrieving said
15 samples from said third frame portion.

13 12
1 36. A decoder as claimed in claim 35, characterized in that the
2 encoder further comprises synthesis filter means for
3 reconstructing a replica of the wide-band digital signal in
4 response to the quantized subsignals received, the synthesis
5 filter circuit combining the subsignals and applying
6 multiplication to form the signal band of the wide band signal.

14 12
1 37. A decoder as claimed in claim 35, characterized in that
2 the encoded digital signal further comprises scale
3 factor information relating to scale factors, a scale factor
4 being associated with at least one of the quantized subsignals
5 contained in the third frame portion, and the third frame
6 portion further including said scale factor information, and
7 the decoder further comprises third retrieval means
8 for retrieving the scale factor information from said third
9 frame portion and storage means for storing said scale factor
10 information.

15 14
1 38. A decoder as claimed in claim 37, characterized in that the
2 third retrieval means are means for retrieving 6-bit words from
3 the scale factor information, each 6-bit word representing a

scale factor for a quantized subsignal.

¹⁶
~~39~~. A decoder as claimed in claim ¹²~~35~~, characterized in that the second retrieval means are means for retrieving 4-bit words as the allocation information from said second frame portion, each four bit word representing the number of bits with which the samples of a quantized subsignal is represented.

¹⁷
~~40~~. A decoder as claimed in claim ¹⁶~~39~~, characterized in that upon detection of a 4-bit word '0000' for a specific subsignal by the second retrieval means, the third retrieval means are inhibited to retrieve samples from the third frame portion for said specific subsignal.

¹⁸
~~41~~. A decoder as claimed in claim ¹⁶~~39~~, characterized in that upon detection of a 4-bit word '0000' for a specific subsignal by the second retrieval means, the third retrieval means are inhibited to retrieve a scale factor from the third frame portion for said specific subsignal.

¹⁹
~~42~~. A receiver for receiving an encoded digital signal and for converting the encoded digital signal into a wideband digital signal, comprising a decoder for decoding the encoded digital signal,

wherein the encoded digital signal represents a wideband digital signal having a sampling frequency F_s , and the encoded digital signal comprises consecutive frames, each frame comprising a plurality of information packets, each information packet comprising N bits, N being larger than 1, a frame comprising at least a first frame portion including syn-

11 chronization information,
 12 and wherein the decoder comprises:
 13 an input for receiving the encoded digital signal,
 14 means for converting the encoded digital signal into a
 15 replica of the wideband digital signal, and
 16 an output for supplying the replica of the wideband
 17 digital signal,
 18 characterized in that said converter is arranged for
 19 converting a signal having a number of information packets in
 20 one frame determined according to the formula

21
$$P = \frac{BR}{N} \times \frac{n_s}{F_s}$$

22
 23 where BR is the bitrate of the encoded digital signal and n_s is
 24 the number of samples of the wideband digital signal whose
 25 corresponding information in the encoded digital signal is
 26 included in one frame of the encoded digital signal, and
 27 if P is an integer, the number of information packets
 28 in one frame is P, and
 29 if P is not an integer, the number of information
 30 packets in a number v of the frames is P', where P' is the
 31 highest integer whose value is less than P; and the number of
 32 information packets in a number w of the other frames is equal
 33 to P'+1, the numbers v and w being selected such that the
 34 average frame rate of the encoded digital signal is
 35 substantially equal to F_s/n_s .

36 ~~43. A receiver as claimed in claim 42, characterized in that~~
 37 ~~the receiver further comprises converter means for converting~~

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5 *pc2*

~~the transmission signal into the encoded digital signal, the converter means having an output coupled to the input of the decoder.~~

c *bel*

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~~44~~

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~~43~~

A receiver as claimed in claim ~~43~~, characterized in that the receiver is *arranged* for reproducing the encoded digital signal signal from a record carrier, and the receiver comprises a reproducing unit, the reproducing unit having an output which is coupled to an input of the converter means.